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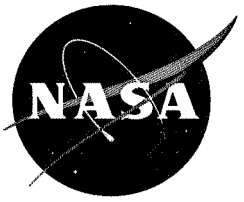

JOHN F. KENNEDY
SPACE CENTER

KSC APOLLO/SATURN
CONFIGURATION MANAGEMENT MANUAL

K-AM-03

KSC APOLLO/SATURN
CONFIGURATION MANAGEMENT MANUAL

REVISION 2
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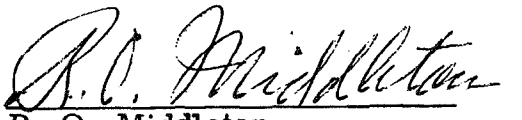

R. O. Middleton
Rear Admiral, USN
KSC Apollo Program Manager

(130-39-0002)

LIST OF EFFECTIVE PAGES

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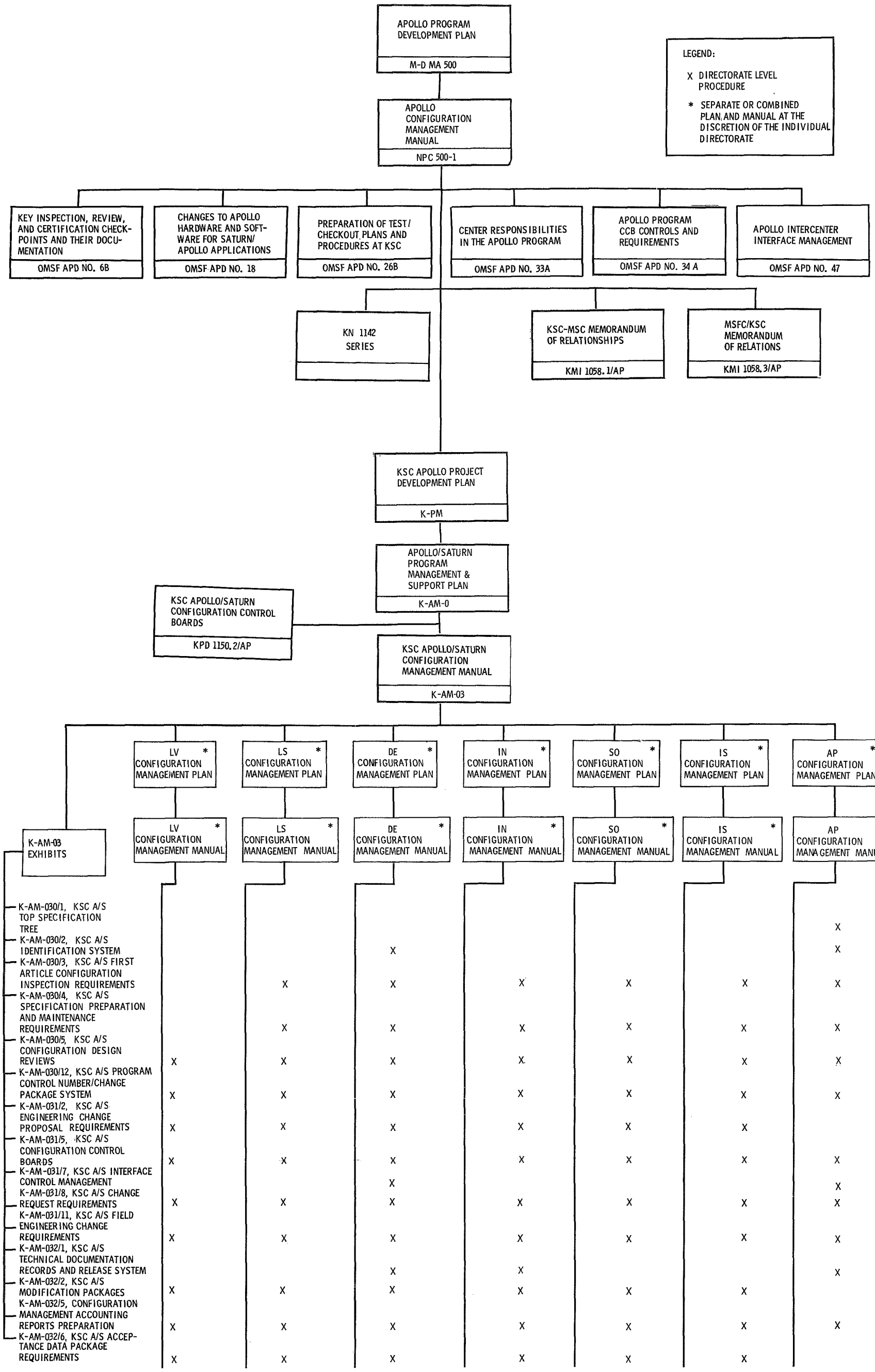
SECTION I
INTRODUCTION

1.1 PURPOSE AND SCOPE

K-AM-03 establishes and defines policy, levies requirements, and assigns related responsibilities for the Apollo/Saturn Configuration Management Program at the John F. Kennedy Space Center (KSC).

The requirements of this document apply to all organizations supporting the Apollo/Saturn Program except those involved in the portions of the Manned Space Flight Ground Operations Support System (GOSS) located at KSC. Those projects constituting GOSS which are excluded from the configuration management requirements stated in this document are: the Launch Information Systems, the Manned Space Flight Network, and the Mission Control System. These systems shall be governed by the configuration management requirements stated in NMI 8610.4, Procedures Governing Ground Operations Support Systems for Manned Space Flight Missions.

K-AM-03 translates the requirements of M-D MA-500, the Apollo Program Development Plan, and NPC 500-1, the Apollo Configuration Management Manual, for application at KSC. The detail requirements implementing this configuration management program at KSC are in the K-AM-03X/XX series of configuration management exhibits listed in section III (see Figure 1-1). The detail plans and procedures implementing these requirements will be developed by each directorate, as applicable.



	LV	LS	DE	IN	SO	IS	AP
K-AM-030/1, KSC A/S TOP SPECIFICATION TREE							X
K-AM-030/2, KSC A/S IDENTIFICATION SYSTEM			X				X
K-AM-030/3, KSC A/S FIRST ARTICLE CONFIGURATION INSPECTION REQUIREMENTS		X	X	X	X	X	X
K-AM-030/4, KSC A/S SPECIFICATION PREPARATION AND MAINTENANCE REQUIREMENTS		X	X	X	X	X	X
K-AM-030/5, KSC A/S CONFIGURATION DESIGN REVIEWS	X	X	X	X	X	X	X
K-AM-030/12, KSC A/S PROGRAM CONTROL NUMBER/CHANGE PACKAGE SYSTEM	X	X	X	X	X	X	X
K-AM-031/2, KSC A/S ENGINEERING CHANGE PROPOSAL REQUIREMENTS	X	X	X	X	X	X	
K-AM-031/5, KSC A/S CONFIGURATION CONTROL BOARDS	X	X	X	X	X	X	X
K-AM-031/7, KSC A/S INTERFACE CONTROL MANAGEMENT			X				X
K-AM-031/8, KSC A/S CHANGE REQUEST REQUIREMENTS	X	X	X	X	X	X	X
K-AM-031/11, KSC A/S FIELD ENGINEERING CHANGE REQUIREMENTS	X	X	X	X	X	X	X
K-AM-032/1, KSC A/S TECHNICAL DOCUMENTATION RECORDS AND RELEASE SYSTEM			X	X			X
K-AM-032/2, KSC A/S MODIFICATION PACKAGES	X	X	X	X	X	X	
K-AM-032/5, CONFIGURATION MANAGEMENT ACCOUNTING REPORTS PREPARATION	X	X	X	X	X	X	X
K-AM-032/6, KSC A/S ACCEP-TANCE DATA PACKAGE REQUIREMENTS	X	X	X	X	X	X	

Figure 1-1. KSC Apollo/Saturn Configuration Management Document Structure

SECTION II
AUTHORITIES AND RESPONSIBILITIES

2.1 KSC APOLLO PROGRAM MANAGER

The KSC Apollo Program Manager (APM) has been delegated overall authority and responsibility for the effective initiation and operation of the KSC Apollo/Saturn Configuration Management Program. These responsibilities include:

a. Preparing, issuing, and revising this manual, the K-AM-03X/XX series of KSC configuration management exhibits, and other Apollo/Saturn configuration management policy and requirements documents.

b. Serving as the KSC Apollo/Saturn Configuration Control Board (CCB) Chairman and having sole authority to approve all proposed Class I engineering changes to KSC designed equipment and facilities under configuration control at KSC, except those changes that are within the approval authority of the Director of Information Systems (IN); the IN requirements are described in K-AM-031/5, KSC Apollo/Saturn Configuration Control Boards. The Apollo Program Manager shall also have the authority to appoint the KSC Apollo/Saturn CCB Secretariat and an alternate KSC Apollo/Saturn CCB Chairman.

c. Serving as the single point of contact with other National Aeronautics and Space Administration (NASA) centers' Apollo/Saturn Level II CCB's and the Apollo/Saturn Level I CCB.

d. Establishing the requirements for processing all Apollo/Saturn Class I engineering changes submitted for CCB action, including the requirements for coordination and flow of changes between the Information Systems Level III CCB and the KSC Apollo/Saturn CCB.

e. Defining the authorities of the KSC Apollo/Saturn CCB in the approval of changes.

f. Providing representation to each joint KSC, Manned Spacecraft Center (MSC), and George C. Marshall Space Flight Center (MSFC) configuration management working committee to identify problem areas and prepare intercenter operating agreements. Coordinating, publishing, and assuring the implementation of these intercenter operating agreements at KSC.

g. Establishing an Apollo Program Configuration Management Office (AP-CMO), which has the responsibility for configuration management administrative support.

2.1 KSC APOLLO PROGRAM MANAGER (Continued)

h. Organizing the internal APM configuration management relationships, organizations, duties, and responsibilities; preparing and maintaining an internal APM Configuration Management Plan and Manual, which will outline the APM's methods of implementing this document and its exhibits.

i. Establishing the requirements for a specification program at KSC.

j. Establishing specification approval and change procedures, and maintaining specification status documentation.

k. Ensuring compatibility of KSC configuration management policies.

l. Establishing the requirements for KSC line directorate configuration management plans and manuals, reviewing these documents, and validating their conformance with established KSC requirements.

m. Chairing the First Article Configuration Inspection (FACI); designating the FACI Secretariat and other FACI members as required.

n. Establishing the requirements for the accounting, tracking, and incorporation status reporting of Class I engineering changes.

o. Establishing a Program Control Number (PCN) system which will provide a method for identifying all related documentation required to initiate, process, and/or implement each Apollo/Saturn V Class I engineering change and any companion Class I engineering changes at KSC.

p. Designating representation and assuring participation by the APM in scheduled technical reviews affecting configuration management directives and policies.

q. Establishing the requirements for confirming that acceptance and inspection tests have been conducted at the contractor's facility and that the equipment has met KSC acceptance requirements prior to shipment.

r. Ensuring that KSC has an integrated configuration management system that is compatible with the current methodology of the Office of Manned Space Flight (OMSF) and other centers.

s. Defining performance requirements and assuring that design reviews of new systems and major modifications are conducted to determine if program needs have been met. In addition, the APM will schedule and chair design reviews that are requested for presentation to OMSF.

2.2 KSC LINE DIRECTORATES

Line directorates have the authority and responsibility for implementation and operation of an effective configuration management program in their respective areas. These authorities and responsibilities include:

a. Assuring compliance with the intent of this manual, the K-AM-03X/XX series of configuration management exhibits (see section III), and other Apollo/Saturn configuration management policies and requirements documents published by the APM.

b. Establishing configuration management offices to provide and support the necessary functions within the directorates to implement and maintain an integrated configuration management program.

c. Establishing and assuring the implementation of internal directorate configuration management relationships, organizations, duties, and responsibilities. This shall be accomplished by preparing and maintaining internal configuration management plans and manuals which shall define the directorates' methods of implementing the requirements of this document and its exhibits. Submit these plans and manuals to the APM for review.

d. Supporting the KSC integrated specification program as required.

e. Providing support to the KSC Apollo/Saturn CCB's evaluation of Class I engineering changes, as required, including providing test requirements.

f. Conducting, coordinating, or supporting design reviews; establishing the Contract End Item (CEI) baselines as required.

g. Establishing directorate plans for providing data inputs to configuration accounting and change tracking reports and the Firing Room 4 modification display.

h. Requiring support contractors, through appropriate contract action, to prepare and submit for approval configuration management plans and manuals which describe their methods of implementing applicable KSC configuration management requirements.

i. Furnishing support to the APM to ensure compatibility of configuration management practices at KSC.

j. Assuring that acceptance and inspection tests are performed on equipment for which the line directorate is responsible, and that this equipment meets defined acceptance requirements.

k. Supporting FACI's as required.

2.2 KSC LINE DIRECTORATES (Continued)

l. Assuring that for every approved configuration change, a corresponding change is made to related items affected by the change, including spare parts, training equipment, technical manuals, test and checkout procedures, engineering data, operations and maintenance computer programs, and records.

m. Assuring that appropriate contract action is taken to implement Configuration Control Board Directives (CCBD's).

2.2.1 INFORMATION SYSTEMS. The Director of Information Systems shall establish a Level III CCB to assess and process all requests for change within its designated approval authority. The IN Level III CCB's approval authority is specified in K-AM-031/5, KSC Apollo/Saturn Configuration Control Boards. All requests for change beyond this authority shall be processed by the KSC Apollo/Saturn CCB.

2.2.2 DESIGN ENGINEERING. The Director of Design Engineering shall be responsible for the preparation and maintenance of the Configuration Identification Index (CII) and Configuration Status Accounting Report (CSAR).

2.2.3 LAUNCH OPERATIONS. The Director of Launch Operations shall maintain the Firing Room 4 modification display.

SECTION III
PROCEDURAL EXHIBITS

3.1 KSC CONFIGURATION MANAGEMENT MANUAL EXHIBITS

Specific requirements necessary for the effective implementation of a configuration management program at KSC for Apollo/Saturn equipment and facilities are published in the K-AM-03X/XX series of configuration management exhibits, which are considered a part of this document. A brief description of the contents of each of these exhibits is given below.

3.1.1 KSC APOLLO/SATURN TOP SPECIFICATION TREE, K-AM-030/1. This document includes the requirements for the preparation and maintenance of the KSC Apollo/Saturn Top Specification Tree. The actual KSC Apollo/Saturn Top Specification Tree, which is included, indicates program, project, system, prime equipment, and facility nomenclature and numbers. The systems under configuration control at KSC are identified on the specification tree shown in this document.

3.1.2 KSC APOLLO/SATURN IDENTIFICATION SYSTEM, K-AM-030/2. Requirements for the assignment of identification numbers for specifications, specification changes, company standards, CEI's, Engineering Orders, drawings, parts, manufacturers, and KSC change documentation are established in this document.

3.1.3 KSC APOLLO/SATURN FIRST ARTICLE CONFIGURATION INSPECTION REQUIREMENTS, K-AM-030/3. This document defines the KSC FACI requirements. The FACI is a formal technical review which establishes the Product Configuration Baseline for the CEI. The primary result of the FACI is formal acceptance by the procuring organization of Part II of the CEI detail specification as an audited and approved document.

3.1.4 KSC APOLLO/SATURN SPECIFICATION PREPARATION AND MAINTENANCE REQUIREMENTS, K-AM-030/4. This document provides general requirements for a specification program at KSC. Discrete specification formats are given for each type of specification prepared at KSC. The means of updating each of these types of specifications are also described.

3.1.5 KSC APOLLO/SATURN CONFIGURATION DESIGN REVIEWS, K-AM-030/5. This document establishes the requirements and defines the methods of conducting design reviews for CEI's.

3.1.6 KSC APOLLO/SATURN PROGRAM CONTROL NUMBER/CHANGE PACKAGE SYSTEM, K-AM-030/12. The requirements and responsibilities for implementation of a PCN and change packaging system at KSC for all configuration management documentation concerning Apollo/Saturn V Class I engineering changes are described in this document. Through the use of this system, management may obtain additional visibility on the total effect of a Class I engineering change on KSC.

3.1.7 KSC APOLLO/SATURN SPECIFICATION MAINTENANCE PROCEDURE, K-AM-031/1. The information in this document was placed in K-AM-030/4 to eliminate having two documents concerning specifications. This document, therefore, has been CANCELLED.

3.1.8 KSC APOLLO/SATURN ENGINEERING CHANGE PROPOSAL REQUIREMENTS, K-AM-031/2. This document outlines the requirements for preparing, submitting, and processing Engineering Change Proposals (ECP's) at KSC. The ECP is used by a contractor to propose a Class I engineering change to equipment, systems, and facilities for which KSC has design responsibility. The conditions which necessitate processing a change as an ECP are also defined.

3.1.9 APOLLO/SATURN PROCEDURE FOR ENGINEERING CHANGES TO SYSTEMS, EQUIPMENTS, AND FACILITIES, K-AM-031/3. This document has been CANCELLED. All ECP requirements have been combined and placed in K-AM-031/2. All FACI requirements are now in K-AM-030/3 to eliminate redundancy.

3.1.10 APOLLO/SATURN KSC PROCESSING OF ENGINEERING CHANGE PROPOSALS, K-AM-031/4. This document has been CANCELLED and the applicable information previously in it has been placed in K-AM-031/2 and K-AM-031/5 to eliminate duplication.

3.1.11 KSC APOLLO/SATURN CONFIGURATION CONTROL BOARDS, K-AM-031/5. This document defines the authorities and responsibilities for the operation and support of the KSC Apollo/Saturn CCB and the Information Systems Level III CCB in the assessment, processing, and approval/disapproval of KSC Apollo/Saturn Class I engineering changes.

3.1.12 KSC APOLLO/SATURN CONFIGURATION MANAGEMENT OFFICES, K-AM-031/6. This document has never been issued and has been CANCELLED.

3.1.13 KSC APOLLO/SATURN INTERFACE CONTROL MANAGEMENT, K-AM-031/7. This document states the requirements and responsibilities for the initiation, review, and approval of Level "A" and "B" Interface Revision Notices (IRN's) which affect control of Interface Control Documents (ICD's) at KSC. The requirements and responsibilities concerning KSC's processing and approval/disapproval of Level "A" ICD/IRN's received from other centers are also included.

3.1.14 KSC APOLLO/SATURN CHANGE REQUEST REQUIREMENTS, K-AM-031/8. The requirements for the preparation, submittal, and processing of Change Requests (CR's) are specified. It also defines the conditions which necessitate the initiation of a CR for equipment located at KSC for which KSC, MSFC, or MSC have design responsibility.

3.1.15 KSC APOLLO/SATURN CONFIGURATION CONTROL BOARD MEETING MINUTES, K-AM-031/9. This document has never been issued and has been CANCELLED. All information concerning Configuration Control Boards is in K-AM-031/5.

3.1.16 KSC APOLLO/SATURN SACCB PROCEDURES, K-AM-031/10. This document has never been issued and has been CANCELLED.

3.1.17 KSC APOLLO/SATURN FIELD ENGINEERING CHANGE REQUIREMENTS, K-AM-031/11. The requirements for initiation, evaluation, submittal, and incorporation of Field Engineering Changes (FEC's) to Apollo/Saturn systems, equipment, and facilities for which KSC has design, operations, or maintenance responsibility are in this document. The requirements for initiating and processing FEC's to equipment for which MSFC and MSC have design responsibility are also specified. The FEC is a departure from the routine method for submittal, evaluation, approval, and implementation of Class I engineering changes to Apollo/Saturn equipment, systems, and facilities for which KSC has design or operations and maintenance responsibility.

3.1.18 KSC APOLLO/SATURN TECHNICAL DOCUMENTATION RECORDS AND RELEASE SYSTEM, K-AM-032/1. This document prescribes the minimum requirements for the implementation and maintenance of a technical documentation record and release system which applies to all technical documentation prepared for any Apollo/Saturn systems, equipment, or facilities for which KSC is responsible.

3.1.19 KSC APOLLO/SATURN MODIFICATION PACKAGES, K-AM-032/2. This document defines the requirements and responsibilities for preparation of Modification Packages required to implement an approved Class I engineering change. It defines the requirements for initiating and processing the Modification Instruction, KSC and MSFC Installation Notice Cards (INC's), and any required secondary INC's. The requirements and responsibilities for processing MSC and MSFC initiated Modification Kits are also included.

3.1.20 KSC APOLLO/SATURN CONFIGURATION MANAGEMENT REVIEW PROCEDURE, K-AM-032/3. This document has never been issued and has been CANCELLED.

3.1.21 KSC APOLLO/SATURN CONFIGURATION ACCOUNTING REPORTS, K-AM-032/4. This document has never been issued and has been CANCELLED. All configuration accounting activities are described in K-AM-032/5.

3.1.22 CONFIGURATION MANAGEMENT ACCOUNTING REPORTS PREPARATION, K-AM-032/5. The requirements, responsibilities, and procedures for the preparation and maintenance of the CII and CSAR are described in this document.

3.1.23 KSC APOLLO/SATURN ACCEPTANCE DATA PACKAGE REQUIREMENTS, K-AM-032/6. The Acceptance Data Package (ADP) is a collection of documents which depicts the current configuration of the CEI to which it applies. This document outlines the requirements for initiation, maintenance, and disposition of the ADP for each CEI delivered to and accepted by KSC for the Apollo/Saturn Program.

NOTE

The relationships of the K-AM-03X/XX exhibits covering the initiation, processing, and control of Class I engineering changes to Apollo/Saturn systems, equipment, and facilities under configuration control for which KSC has design and/or operations and maintenance responsibility are summarized in appendix A of K-AM-03.

APPENDIX A
CHANGE PROCESSING

A.1 GENERAL

This description of KSC change processing specifies the overall requirements for initiating, processing, and implementing Class I engineering changes to Apollo/Saturn systems, equipment, facilities and the documentation for which KSC has design, operations, and/or maintenance responsibility and which are under configuration control; e.g., identified in K-AM-030/1, KSC Apollo/Saturn Top Specification Tree.

A.2 CHANGE PROCESSING FLOW

The primary flow of requests for change normally can be divided into three distinct phases: initiation, processing, and implementation. Figure A-1 depicts the general flow of the documentation and hardware, when applicable, through these three phases.

Because no attempt has been made to show the detailed functions related to each major activity, this information may be found in the exhibits of K-AM-03, KSC Apollo/Saturn Configuration Management Manual, referenced under each block.

The descriptions below state the general purpose of each change initiation document and give the points at which special requirements may result in a variation from the normal change processing methods shown in Figure A-1.

A.2.1 CHANGE REQUESTS. Change Request requirements are covered in K-AM-031/8, KSC Apollo/Saturn Change Request Requirements. The CR is the official means of requesting design change action from the appropriate design organization. CR's may be used to initiate changes to MSFC, MSC, and KSC designed equipment.

Variations from the routine shown in Figure A-1 for the processing of a CR may occur as follows:

a. After technical review, all CR's for IN designed equipment are forwarded to the IN Level III CCB for approval instead of to the KSC Apollo/Saturn CCB. Those CR's that exceed the approval authority of the IN Level III CCB are forwarded to the KSC Apollo/Saturn CCB for approval or validation.

b. Mandatory CR's on Design Engineering (DE) designed equipment shall be forwarded by DE to the KSC Apollo/Saturn CCB for approval and issuance of a CCBD authorizing expedited design, procurement, and/or installation. Highly Desirable and Desirable CR's, if approved by DE, will be returned to the originator, authorizing him to prepare an ECP for subsequent processing through normal channels.

A.2.2 FIELD ENGINEERING CHANGES. Field Engineering Change requirements are covered in K-AM-031/11, KSC Apollo/Saturn Field Engineering Change Requirements. The FEC is the official means of requesting from MSFC, MSC, or KSC the correction of an existing emergency situation affecting equipment, systems, or facilities. Use of the FEC is limited to a one-time, one effectivity basis.

The processing of an FEC may vary from that shown in Figure A-1 in the following instances:

a. An ECP will be subsequently processed to specify other effectivities for which the change is required and to authorize changes to drawings and other affected documentation which result from an approved FEC.

b. After Flight Readiness Test/Countdown Demonstration Test (FRT/CDDT), all FEC's must be routed through the Director of Launch Operations and the Mission Director for approval prior to implementation.

A.2.3 INTERFACE REVISION NOTICES. Interface Revision Notice requirements are covered in K-AM-031/7, KSC Apollo/Saturn Interface Control Management. The Preliminary IRN (PIRN) is the official means of requesting a change in an existing Interface Control Document. These interface levels are involved:

a. Level "A" (intercenter).

b. Level "B" (interdirectorate).

c. Level "C" (intradirectorate).

Only the Level "A" IRN flow is depicted in Figure A-1.

A Level "B" PIRN is submitted to the directorate which controls the ICD being revised. The PIRN does not become a technically approved IRN until it is technically coordinated between the controlling directorate and the interfacing directorate to assure agreement. This agreement must be documented by approval signatures from all affected directorates prior to the IRN and its associated request for change being included in a change package which is submitted to the KSC Apollo/Saturn CCB for program approval.

Level "C" IRN's are considered internal directorate documents and are covered in applicable directorate procedures.

A.2.4 ENGINEERING CHANGE PROPOSALS. Engineering Change Proposal requirements are covered in K-AM-031/2, KSC Apollo/Saturn Engineering Change Proposal Requirements. The ECP is the official means a contractor uses to request a Class I engineering change to equipment, systems, or facilities for which KSC has design responsibility. It formalizes engineering changes in accordance with official bulletins, regulations, and other directives.

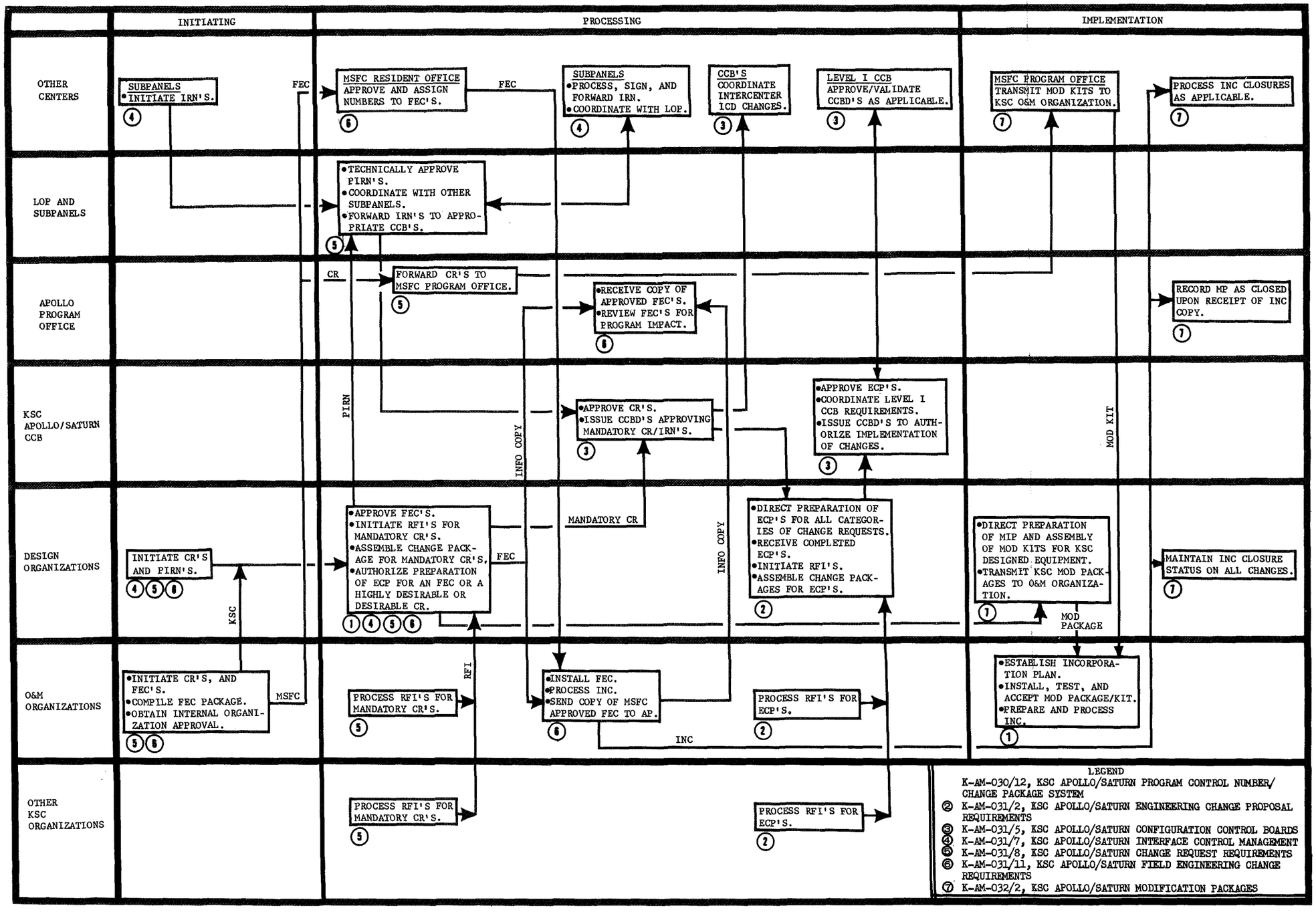


Figure A-1. Change Processing Flow

A.2.4 ENGINEERING CHANGE PROPOSALS (Continued)

An ECP may be prepared without direction from the cognizant design organization. If so, this ECP is submitted to the design organization, assessed, and if approved, sent to the appropriate CCB for processing as shown in Figure A-1.

A.2.5 MODIFICATION PACKAGES. Modification Package requirements are covered in K-AM-032/2, KSC Apollo/Saturn Modification Packages. The Modification Package is composed of a Modification Instruction Package (documentation) and a Modification Kit (hardware), which are compiled to implement an approved Class I engineering change.

A.2.6 PROGRAM CONTROL NUMBERS. Program Control Number requirements are covered in K-AM-030/12, KSC Apollo/Saturn Program Control Number/Change Package System. The PCN provides a method of relating and packaging all configuration management documentation required to request, process, and implement a particular Class I engineering change requirement at KSC. To accomplish this:

a. Each center assigns PCN's within predetermined, five-digit blocks to all requests for change initiated at that center.

b. The KSC design organization responsible for the equipment and facilities to be changed assigns PCN's upon request from the originator.

c. Whenever Level "A" interfaces are involved in a change, the Apollo Program Office provides necessary coordination to assure that only one PCN is assigned to the related requests for change at the centers affected by the change.

A PCN is put on each document needed for the design organization and the CCB to assess the change.

A.2.7 CONFIGURATION CONTROL BOARDS. KSC Configuration Control Board requirements are covered in K-AM-031/5, KSC Apollo/Saturn Configuration Control Boards. Each CCB assesses and processes all requests for change within its approval authority. The decision of each CCB Chairman is recorded on a CCBD. This document is binding on all affected organizations and constitutes centerwide direction.

a. A Level III CCB is maintained within Directorate of Information Systems to assess and process all requests for change within its approval authority. (See paragraph A.2.1.a.)

b. After FRT/CDDT, all requests for change are submitted to the KSC Apollo/Saturn CCB which, after reviewing the change, transmits it to the Level I CCB for approval/validation. This change cannot be implemented without Level I CCB approval.

APPENDIX B
K-AM-03 AND EXHIBITS MASTER LIST OF DEFINITIONS

ACCEPTANCE. The act of an authorized representative of NASA by which NASA assents to ownership of existing and identified articles, or approves specific services rendered as partial or complete performance of the contract.

ADDENDUM SPECIFICATION. A new and complete specification for a new Contract End Item which has been created from the existing specification for an existing CEI.

APOLLO PERFORMANCE REQUIREMENTS DOCUMENTS. Documents containing new or additional Apollo Program requirements; prepared to furnish design organizations with technical requirements and parameters for the design of additional support equipment/facilities/software.

AREA SPECIFICATION. A document which defines within each project, the requirements for equipment and facilities which perform a single major function in support of assembly, test, checkout, and launch.

CHANGE CATEGORY. The priority classification assigned to a request for change which indicates the criticality of incorporation of the change requirement. The three change categories presently are Mandatory, Highly Desirable, and Desirable.

CHANGE IDENTIFICATION NUMBER. A packaging number assigned by the contractor to package all engineering data defining a system requirements change or an engineering change, and used to control, sequence, and account for production and retrofit accomplishment of the change.

CHANGE PACKAGE. A compilation of available relevant information which is assembled to propose and substantiate a Class I engineering request for change.

CHANGE REQUEST. An official means of requesting design change action from the appropriate design organization. It describes the problem in sufficient detail to permit immediate identification and evaluation of the problem.

CLASS I ENGINEERING CHANGE. All proposed engineering changes, in accepted and unaccepted complete end items, assemblies, or items to the lowest level of assembly provisioned, shall be designated as Class I changes in design whenever one or more of the following is affected:

a. Any proposed change to a drawing covering a unit of operational equipment that requires retrofit.

CLASS I ENGINEERING CHANGES (Continued)

b. Specifications, price or fee, weight, guarantees, delivery, or test schedules (including the total specification tree and documents referenced in the specification).

c. Reliability and/or maintainability.

d. Performance as stated in either definite terms or goals, or as experienced in items in service use.

e. Interchangeability, or a change in category regarding substitutability or replaceability.

f. Safety, including fire protection/alarm capability.

g. Electrical interference to communication - electronic equipment or electromagnetic radiation hazards.

h. Changes to Ground Support Equipment (GSE) or facilities which have an effect on other Launch Vehicle Equipment Facilities, Class I or II Training Equipment, or Government Furnished Equipment.

i. Preset adjustments or preset schedules to the extent that (1) new identification must be assigned, or (2) operating limits are affected.

j. Systems, equipments, or facilities procured by organizations to the extent that other organizations must accomplish an engineering change to maintain compatibility at the interface.

k. Operational computer programs to the extent that a change must be incorporated into an existing program or a new program added for program use. Changes to maintenance or trainer programs shall be treated as effects on GSE or trainers.

l. A change of qualified vendors; e.g., a different or new source, applicable at the removal-reparable level of higher assemblies.

CLASS II ENGINEERING CHANGES. Any engineering change not falling within the definition of Class I engineering change.

CONFIGURATION. The complete technical description required to fabricate, test, accept, operate, maintain, and logistically support systems and equipment.

CONFIGURATION ACCOUNTING. Act of reporting and documenting changes made to systems/equipment subsequent to the establishment of a baseline configuration to maintain a configuration status.

CONFIGURATION BASELINE. An approved and defined point of departure for control of future changes in system or equipment performance and design. A baseline is documented by a specification and other documents and is technically defined by formal approval of the specification, or a part thereof, by the procuring organization.

CONFIGURATION CONTROL. Systematic evaluation, coordination, approval, or disapproval of proposed changes to any configuration baseline.

CONFIGURATION CONTROL BOARD. The functional body composed of representatives of KSC responsible for configuration control. It approves or disapproves all requests for change.

CONFIGURATION CONTROL BOARD DIRECTIVE. The document which records the decision of the Configuration Control Board Chairman and is the basis for follow-on action by the Procuring Contracting Officer and other Government organizations.

CONFIGURATION IDENTIFICATION. The technical documentation defining the approved configuration of systems and equipment.

CONFIGURATION MANAGEMENT. The formal set of procedural concepts by which a uniform system of configuration identification, control, and accounting is established and maintained for the configuration of all Apollo/Saturn equipment, systems, and facilities.

CONFIGURATION MANAGEMENT DOCUMENTATION. The interdirectorate and intercenter documentation required to assure proper initiation, processing, and implementation of a Class I engineering change requirement.

CONTRACT END ITEM. An aggregation of hardware/software, or any of its discrete portions, which satisfies an end use function and is designated for configuration management. Contract End Items may vary widely in complexity, size, and type. During development and initial production, Contract End Items are only those specification items that are referenced directly in a contract, or an equivalent in-house agreement. During the operation and maintenance period, any reparable item designated for separate procurement is a CEI.

CRITICAL DESIGN REVIEW. A formal technical review of design which identifies specific engineering documentation for release to production and establishes a basis for provisioning, preparation of technical manuals, and other supporting activities dependent upon a detail design definition of a CEI.

DESIGN ORGANIZATION. The KSC directorate, or any portion thereof, responsible for the design, development, fabrication, installation, acceptance testing, modification, and major refurbishment of designated KSC provisioned facilities and equipment.

DESIGN REQUIREMENTS BASELINE. A baseline for a CEI, a system segment, or a system which is technically defined by approval of Part I of the applicable specification(s).

DESIRABLE CHANGE. All required changes which are not categorized as Mandatory or Highly Desirable changes are incorporated on a routine, noninterference, no overtime basis.

DEVIATION. A specific authorization, granted before the fact, to depart from a particular requirement of specifications or related documents.

DIRECT SUPPORT-REAL PROPERTY INSTALLED EQUIPMENT. NASA owned or leased equipment that is physically attached to, integrated into, or built in or on NASA property.

DOCUMENTATION PACKAGE. Assembly, storage, and maintenance of all related configuration management documentation required to initiate, process, and implement a particular Class I engineering change requirement.

DOCUMENT RELEASE. That final act taken by the preparing organization just prior to transmitting a document to the installation, requesting, using, operating, maintaining, or other organization having cause to make official use of the document. This act shall consist of obtaining authorized signatures on the face of the document, letter of transmittal, standard form, or any other published requirement stipulated by the directorate releasing the document.

DOCUMENT RELEASE AUTHORIZATION. The form used to record and control the formal release of engineering, operation, and maintenance technical documents to assure that each release is consistent with prescribed procedures and is properly identified and recorded.

DRAWING AND PART NUMBER. A transient number assigned to identify all parts and assemblies that are interchangeable in all applications where the part/assembly is used. It is used to control assembly and replacement at all levels including the Contract End Item itself.

DRAWING BASELINE. A baseline established at the Critical Design Review (CDR) which represents the released design engineering documentation committing an accepted specific design to manufacture.

EMERGENCY SITUATION. A situation which exists when a Class I engineering change is required to accomplish any of the following:

a. Prevent serious injury or possible loss of life.

b. Prevent serious damage or possible loss of critical equipment.

c. Complete a scheduled test when the failure to complete this test would seriously impact KSC's ability to comply with program commitments.

d. Prevent a shutdown which will impact KSC's ability to meet a program schedule or complete an operational mission.

ENGINEERING CHANGE. Any design change to an article, delivered or to be delivered, that will require revision to the contract specifications or engineering drawings, or to the documents referenced therein, that are approved or authorized for applicable articles under Government contract.

ENGINEERING CHANGE PROPOSAL. The document which formalizes proposed equipment, system, or facility changes in accordance with applicable bulletins, regulations, and other directives.

ENGINEERING ORDER. A means of initiating, describing, and authorizing equipment design changes either in advance of, or concurrent with, the release of changed drawings to NASA equipment.

EQUIPMENT. A general term usually referring to a CEI or aggregation of CEI's, and usually used to differentiate the CEI from a facility, identification, or requirements item.

EXISTING EQUIPMENT. Systems and CEI's for which initial installation has been completed (ground support equipment and facilities accepted by KSC procuring organizations that are now in integrated testing or are operational at KSC).

FACILITY. Real property which includes land and whatever is erected upon or affixed to that land, including those items of Direct Support-Real Property Installed Equipment or "installed property" attached to or installed in real property by the Corps of Engineers or a construction contractor. It includes those fixtures and items normally required for the functional use of a structure, that are built into or permanently affixed to the structure or installed equipment, the removal of which would impair the function or safety of the facility.

FACILITY ITEM. Any fixed installation which supports systems and is functionally integrated with facility equipment, or which is used with the system, but is functionally independent of the system.

FEC PACKAGE. Includes the FEC form and any supporting documentation which will facilitate evaluation and installation of the FEC.

FIELD ENGINEERING CHANGE. A means to expeditiously effect a Class I engineering change which corrects an existing emergency situation on Apollo/Saturn systems, equipment, or facilities for which KSC has design and/or maintenance responsibility.

FIND NUMBER. A number used in conjunction with system schematics to identify each controlled component within a system.

FINAL CONFIGURATION REVIEW. A formal technical review performed prior to the initiation of simulated countdown to verify that all changes approved since FACI have been incorporated, that the documentation has been updated, and that the configuration and related documentation are in complete agreement.

FIRST ARTICLE CONFIGURATION INSPECTION. A coordinated effort culminating in a formal technical review that establishes the CEI Product Configuration Baseline.

FIRST USAGE EFFECTIVITY. The first vehicle and major milestone for which a change is scheduled for a specific location. For example, the first usage effectivity for a change that should be installed before the Plugs Out Countdown Demonstration Test at Pad 39A for AS-506, 509, and 510 would be AS-506. The first usage effectivity for installation at Pad 39B for AS-507 and AS-509 would be AS-507.

FUNCTIONAL INTERFACE. Point of juncture involving specific system design characteristics. Requirements include, but are not limited to, structural loads, fluid flows, electrical circuit characteristics, and critical environmental conditions (natural or induced).

GOVERNMENT FURNISHED EQUIPMENT. Items in the possession of or acquired directly by the Government and delivered to or otherwise made available to the contractor.

GROUND SUPPORT EQUIPMENT. All equipment required on the ground to make a manned space flight system, support system, subsystem, or end item of equipment operate in its intended environment. This includes all equipment required to install, launch, arrest, guide, control, direct, inspect, test, adjust, calibrate, appraise, gauge, measure, assemble, disassemble, handle, transport, safeguard, store, actuate, service, repair, overhaul, maintain, or operate the system, subsystem, end item, or component.

GROUP I SPECIFICATIONS AND STANDARDS. Government specifications and standards listed for use by the Government requiring organization and industry documents coordinated under Department of Defense policies and procedures. (See MIL-STD-143, Specifications and Standards, Order of Precedence for the Selection of, for further explanation.)

GROUP II SPECIFICATIONS AND STANDARDS. Industry specifications and standards (e.g., those promulgated by nationally recognized associations, committees, and technical societies) listed for use by the Government requiring organization, for which status equivalent to military documents has not been established.

GROUP III SPECIFICATIONS AND STANDARDS. Government specifications and standards not previously listed by the requiring organization.

GROUP IV SPECIFICATIONS AND STANDARDS. Industry specifications and standards not previously listed for use by the Government requiring organization. Company specifications and standards are not to be considered as a part of this group. Copies of industry specifications and standards are not available from the Government and should be obtained from the association concerned.

GROUP V SPECIFICATIONS AND STANDARDS. Company specifications and standards. Reference to a company specification or standard for new applications or designs shall be discontinued upon the issuance of a specification or standard in Group I, II, III, or IV covering an interchangeable item of equivalent quality.

HIGHLY DESIRABLE CHANGE. An engineering change required to effect any of the items listed below shall be classified Highly Desirable. Any action short of launch delay, including use of premium time, premium transportation, or rearrangement of internal KSC schedules will be used to incorporate this type of change.

a. Meet secondary mission objectives.

b. Eliminate an unacceptable priority II single failure point risk or UCR.

c. Lend a high degree of improvement in successful launch or checkout operations.

d. Eliminate excessive resource expenditures.

e. Significantly reduce refurbishment costs and schedules.

f. Eliminate a potential hazard which would result in serious injury or damage to flight hardware.

IDENTIFICATION ITEM. A unit which can be qualified by inspection and/or simple demonstration. Once the item is in manufacture:

a. Quality control at the manufacturing level can be the basis for verification of quality, and

b. Acceptance can be based on verification that the item, as fabricated and assembled, conforms to the drawings, and

c. Acceptance testing to verify performance will not be specified, and

d. Few, if any, design changes are anticipated once the Product Configuration Baseline for the item is established.

INITIAL REQUEST FOR CHANGE. The configuration management documentation which first identifies the requirement for a new Class I engineering change.

INSTALLATION NOTICE CARD. The official document used to inform the cognizant KSC organization that a particular modification has been installed, tested, verified, and accepted in accordance with its associated change instruction.

INTERCENTER COORDINATION PANEL. Coordinates, maintains, and technically approves all intercenter interfaces among affected NASA centers.

INTERCENTER INTERFACE DOCUMENTATION REPOSITORY. The agency that maintains bonded historical records and releases the "Repository Issue" of all intercenter ICD's which are originated and transmitted to the repository by the appropriate intercenter coordination panels.

INTERFACE CONTROL DOCUMENT. Documents establishing joint agreements for interface requirements. They are considered "controlled" in that these interface requirements cannot be unilaterally changed.

INTERCHANGEABLE ITEM. One which (1) possesses such functional and physical characteristics as to be equivalent in performance, reliability, and maintainability to another item of similar or identical purpose; and (2) is capable of being exchanged for the other item (a) without selection for fit or performance and (b) without alteration of the item itself or of adjoining items, except for adjustment.

INTERFACE REVISION NOTICE. Defines changes to an ICD. The IRN serves as a notice of changes outstanding against an approved ICD. Technical and program approval of an IRN will result in incorporation of the IRN in a subsequent revision to the ICD.

LEVEL "A" INTERFACE. The point of juncture between two or more hardware end items or components which are under the design jurisdiction of two or more National Aeronautics and Space Administration centers.

LEVEL "B" INTERFACE. The point of juncture between two or more hardware end items or components for which two or more KSC directorates have design responsibility.

LEVEL "C" INTERFACE. The point of juncture between two or more hardware end items or components for which two or more organizations within one directorate have design responsibility.

LOP PANEL/SUBPANEL. An intercenter technical working group responsible for ICD/IRN technical review and approval.

MAINTAINABILITY. A characteristic of design and installation which is expressed as the probability that an item will be retained in or restored to a specific condition within a given period of time when the maintenance is performed in accordance with prescribed procedures and resources.

MAJOR MODIFICATION. An extensive design change authorized to a project, system, or CEI which meets all of the following conditions:

a. New performance functional requirements or new design requirements are established.

b. A new baseline is established by the modification effort.

MANDATORY CHANGE. An engineering change required to effect any of the items listed below will be classified as Mandatory. Any action necessary to accomplish this change, including delay of an established launch date, will be implemented.

a. Eliminate an unacceptable condition which could cause a loss of life, stage, or space vehicle.

b. Meet primary mission objectives.

c. Eliminate an unacceptable priority I or 1S single failure point potential or Unsatisfactory Condition Report.

d. Make a system operable to support a launch.

MANUFACTURER'S IDENTIFICATION NUMBER. A five-digit code number which identifies a contractor or Government organization. This number is used on documentation and hardware where it is necessary to identify the specific manufacturer.

MODIFICATION INSTRUCTION. Document used to convey design engineering requirements for each Modification Instruction Package to the responsible KSC operations and maintenance organization.

MODIFICATION INSTRUCTION PACKAGE. The engineering documentation required to accomplish and document the installation of a modification to a particular CEI or other specifically defined equipment which requires installation at KSC.

MODIFICATION KIT. The hardware associated with a Modification Package.

MODIFICATION PACKAGE. The documentation (Modification Instruction Package) and hardware (Modification Kit) required for implementation of a change.

MODIFICATION REVIEW. An examination of the design activity which results in assurance that the proposed solution to the problem fully recognizes requirements stated by the responsible KSC organization.

NONCONFORMANCE. A condition of any material, part, or product in which one or more characteristics do not conform to the specified requirements.

O&M ORGANIZATION. A KSC/NASA organization responsible for operation and/or maintenance of equipment, systems, or facilities at KSC.

PHYSICAL INTERFACE. Point of juncture involving the mechanical assembly or spatial relationship between interconnecting parts of hardware end items. Included are physical and clearance envelopes established to avoid interferences and to permit access.

PRELIMINARY DESIGN REVIEW. A formal review of the preliminary design of a system segment or CEI to establish system compatibility of design, identify specific engineering documentation, and define physical and functional interface relationships between a CEI and other systems, equipment, or facilities.

PRELIMINARY INTERFACE REVISION NOTICE. An IRN which is preliminary until it is approved by appropriate intercenter panel co-chairmen and by affected center(s) Level II Configuration Control Boards through officially issued Configuration Control Board Directives. It then becomes an official change (IRN) to the parent Interface Control Document.

PRIME EQUIPMENT ITEM. Equipment designated as a deliverable CEI which cannot be specified using the simplified specifications for identification or requirement items. It is one of the more complex contractor-designed CEI's that requires extensive functional tests while assembled.

PROCEDURAL INTERFACE. Point of juncture involving the sequence of events occurring in the assembly, alignment, service, maintenance, test, and operation of related systems, hardware, and computer programs.

PROCUREMENT (CONTRACTS). The KSC organization that has the responsibility of issuing and administering a contract to procure a CEI.

PRODUCT CONFIGURATION BASELINE. A baseline for a CEI which is technically defined by an approved Part II of a CEI specification and which is established by satisfactory completion of a FACI.

PROGRAM CONTROL NUMBER. An eight-digit alphanumeric designator which shall be used to identify a unique Class I engineering change requirement and related interface and/or supporting configuration management documentation.

PROJECT SPECIFICATION. A document which describes the technical performance, design and testing requirements, quality assurance provisions, and documentation and manufacturing standards to be used for a scheduled undertaking, with a program, to accomplish a scientific or technical objective.

QUALITY ASSURANCE. A planned and systematic pattern of all actions necessary to provide adequate confidence that the CEI's will perform satisfactorily in actual operations.

REQUEST FOR CHANGE. The general term which is used to identify any request for Class I engineering change; it is documented by a CR, FEC, IRN, or ECP.

REQUIREMENT ITEM. A piece of inventory equipment which has been developed, is in the Government inventory, or is "off the shelf"; is an item which is Government Furnished Equipment (CEI's being developed for the Apollo/Saturn Program by another organization cannot be considered as being"in" inventory); is used with or assembled into an equipment being developed.

REPLACEABLE ITEM. One which is interchangeable with another item, but which differs physically from the original item in that the installation of the replaceable item requires operations such as drilling, reaming, cutting, filling, shimming, etc., in addition to the normal application and methods of attachment.

REQUEST FOR IMPACT. An official document used to request and report the evaluation and impact that a proposed change to Apollo/Saturn systems, equipment, and/or facilities will have on an organization's design, operations, maintenance, or other responsibilities.

SELECTED SOURCE DOCUMENTS. Items selected from engineering data developed during the definition and acquisition of the facility or equipment being specified. Selected source documents may be used in specifications for existing KSC Apollo/Saturn equipment and facilities. Selected source documents may include drawings, acceptance test procedures, calibration procedures, product or purchase specifications, operations and maintenance manuals, process and material specifications, and George C. Marshall Space Flight Center documents establishing requirements for KSC ground support equipment and facilities.

SERIAL NUMBER. A number used with a Contract End Item number to denote each unit in a mission-design-series and is the engineering effectivity to which technical and management actions are specifically addressed. A serial number is also used with an item identification and part number to denote each unit in a family of noninterchangeable parts which, when reworked or modified to be interchangeable, are reidentified the same.

SINGLE FAILURE POINT. A single item of hardware which, if it fails, would lead directly to loss of life of loss of mission.

SOURCE CONTROL DRAWING. A drawing which specifies configuration, design, and test requirements for an item (other than Military standard items) and which further specifies the sources from which the item shall be obtained.

SPECIFICATION. A document intended primarily for use in procurement, which clearly and accurately describes the essential and technical requirements for items, materials, or services, including the procedures by which it will be determined that these requirements have been met.

SPECIFICATION CHANGE NOTICE. That form used to effect changes to specifications. Specification Change Notices shall be submitted with the related Engineering Change Proposals.

STANDARD. A document that establishes engineering and technical limitations and applications for items, materials, processes, methods, designs, and engineering practices.

SUBSTITUTABLE ITEM. One which possesses such functional and physical characteristics as to be capable of being exchanged for another only under specified conditions or for particular applications without alteration of the items themselves or of adjoining items.

SYSTEM. A composite of all related equipment, facilities, material, support services, and personnel required for a specific operational function so that it becomes a self-sufficient unit in its intended operational and support environment.

SYSTEM SPECIFICATION. A document which defines the technical performance, design and testing requirements, quality assurance provisions, and documentation and manufacturing standards to be used on the system for a segment of Apollo/Saturn equipment.

TECHNICAL DOCUMENTATION. Those forms, manuals, plans, drawings, specifications, procedures, reports, and other similar documents which are necessary to design, fabricate, procure, assemble, install, operate, maintain, change, and otherwise support program items.

TECHNICAL DOCUMENT RECORD SYSTEM. Provides for the identification, storate, cross-reference, and reproduction of technical documentation.

TECHNICAL DOCUMENT RELEASE SYSTEM. Provides for control and distribution of technical documentation.

UNSATISFACTORY CONDITION REPORT. The document used to report a nonconformance to requirements, procedures, or accepted standards, including defects and failures.

VALIDATE. To affix a seal/signature as evidence that the requirements for inspection, test/retest, etc., have been accomplished.

WAIVER. Granted use or acceptance of an article which does not meet specified requirements.

APPENDIX C
K-AM-03 AND EXHIBITS MASTER INDEX OF ABBREVIATIONS

AAP	Apollo Applications Program
A/S	Apollo/Saturn
ACE	Acceptance Checkout Equipment
ACT	Action
ADP	Acceptance Data Package
AP	Apollo Program Office
AP-CMO	Apollo Program Configuration Management Office
AP-SVO-1	Apollo Program Saturn V Branch
AP-SYS	Apollo Program Systems Engineering Office
APDP	Apollo Program Development Plan
APM	Apollo Program Manager
APOH	Apollo Program Office Headquarters
APPRVL	Approval
APS	Auxiliary Power System
AUTH	Authority
AUX	Auxiliary
AVO	Avoid Verbal Orders
C/O	Checkout
C/OL	Contracting Officer Letter
CARR	Customer Acceptance Readiness Review
CAS	Contractor Action Status
CCA	Contract Change Authorization
CCB	Configuration Control Board
CCBD	Configuration Control Board Directive
CCN	Contract Change Notice
CDDT	Countdown Demonstration Test
CDR	Critical Design Review
CEI	Contract End Item
CFE	Customer Furnished Equipment
CII	Configuration Identification Index
CM	Command Module
CMO	Configuration Management Office
COMPL	Complete
CONTR	Contract, Contractor
CR	Change Request
CSAR	Configuration Status Accounting Report
CUR	Current
DC	Direct Current
DCR	Design Certification Review
DE	Design Engineering
DEE-3	Digital Events Evaluator
DE-EEM	Design Engineering, Electrical/Electronics
DE-FAC	Design Engineering, Civil Engineering and Facilities
DE-KEM	Design Engineering, Mechanical Systems
DEL	Delivery

DIST	Distribution
DLO	Director of Launch Operations
DRA	Document Release Authorization
DS-RPIE	Direct Support - Real Property Installed Equipment
DWG	Drawing
ECP	Engineering Change Proposal
ECS	Environmental Control System
ENGR	Engineering
EO	Engineering Order
ESE	Electrical Support Equipment
EST	Estimated
EXP	Expended
FACI	First Article Configuration Inspection
FACT	Flexible Automatic Circuit Tester
FCEI	Facility Contract End Item
FCR	Final Configuration Review
FEC	Field Engineering Change
FRR	Flight Readiness Review
FRT	Flight Readiness Test
GETS	Ground Equipment Test Site
GFE	Government Furnished Equipment
GFP	Government Furnished Property
GOSS	Ground Operations Support System
GOX	Gaseous Oxygen
GSE	Ground Support Equipment
He	Helium
HPG-H_2	High Pressure Gaseous Hydrogen
HPG-He	High Pressure Gaseous Helium
HPG-N_2	High Pressure Gaseous Nitrogen
I&C	Identification and Checkout
ICD	Interface Control Document
IDENT	Identification
IDF	Identification Data Form
IN	Information Systems
INC	Installation Notice Card
INCL	Including
INCORP	Incorporation
INST	Instrument
IRN	Interface Revision Notice
KSC	John F. Kennedy Space Center

LCC	Launch Control Center
LEM	Lunar Excursion Module
LH_2	Liquid Hydrogen
LOC	Location
LOP	Launch Operations Panel
LOX	Liquid Oxygen
LUT	Launcher-Umbilical Tower
MIP	Modification Instruction Package
MIRR	Material Inspection and Receiving Report
MOD	Modification
MODIF	Modification
MOD KIT	Modification Kit
MP	Modification Package
MPS	Modification Package Supplement
MRB	Material Review Board
MSC	Manned Spacecraft Center
MSFC	George C. Marshall Space Flight Center
N_2	Nitrogen
N/A	Not Applicable
N/R	Not Required
NASA	National Aeronautics and Space Administration
O&M	Operations and Maintenance
OBS	Obsolete
ODOP	Offset Doppler
OMSF	Office of Manned Space Flight
P/N	Part Number
PCN	Program Control Number
PDR	Preliminary Design Review
PIRN	Preliminary Interface Revision Notice
PROC	Procured
PROD	Production
PROG	Program
PROJ	Project
PT	Part
PWR	Power
QTY	Quantity
R&D	Research and Development
REL	Release
REQ	Require
RET	Return
REV	Revision
RF	Radio Frequency
RFI	Request for Impact
RLEO	Request for Liaison Engineering Order
RP	Refined Petroleum

S/C	Spacecraft
SCHED	Scheduled
SCN	Specification Change Notice
SEC	Section
SEQ	Sequence
SFP	Single Failure Point
SP	Spares
SS	Service Structure
SUR	Status Updating Report
SVC	Service
TBD	To Be Determined
TD	Technical Data
TECH	Technical
TOT	Total
TWR	Technical Work Request
TYP	Type
UCR	Unsatisfactory Condition Report
UNASGN	Unassigned
UT	Umbilical Tower
VAB	Vehicle Assembly Building

APPENDIX D
K-AM-03 EXHIBITS MASTER INDEX OF FORMS

Form No.	Title	Form Date	Location
DD Form 250	Material Inspection and Receiving Report	August 1, 1967	K-AM-030/3 K-AM-032/2 K-AM-032/6
DD Form 250c	Material Inspection and Receiving Continuation Sheet	October 1, 1966	K-AM-030/3 K-AM-032/6
DD Form 1354	Transfer and Acceptance of Military Real Property	November 1, 1961	K-AM-030/3
14-94	Configuration Control Board Directive	May 1969	K-AM-031/5
14-94A	CCB Directive (Continuation Sheet)	May 1969	K-AM-031/5
KSC 14-100	Change Request	November 1965	K-AM-031/8
KSC 14-100A	Change Request Continuation Sheet	November 1965	K-AM-031/8
KSC 14-119	Installation Notice Card	January 1966	K-AM-031/11 K-AM-032/2
KSC 14-120	Identification Data Form 1	January 1966	K-AM-032/5
KSC 14-121	Identification Data Form 2	January 1966	K-AM-032/5
KSC 14-122	Status Updating Report	January 1966	K-AM-032/5
KSC 14-128	Identification Data Form 3	January 1966	K-AM-032/5
KSC 14-129	Field Engineering Change	February 1967	K-AM-031/11
KSC 14-130	Field Engineering Change Continuation Sheet	February 1967	K-AM-031/11
KSC 14-134	Engineering Change Proposal	February 1966	K-AM-031/2
KSC 14-154	Drawing and Hardware Change Status	April 1967	K-AM-030/3
KSC 14-155	Maintenance Log	July 1967	K-AM-032/6
KSC 14-156	ECP Incorporation Record	July 1967	K-AM-032/6

Form No.	Title	Form Date	Location
KSC 14-157	Time/Cycle Significant Component Log	July 1967	K-AM-032/6
KSC 14-158	CEI Component Replacement Record	July 1967	K-AM-032/6
KSC 14-162	First Article Configuration Inspection Record	June 1968	K-AM-030/3
KSC 14-163	First Article Configuration Inspection Work Sheet	June 1968	K-AM-030/3
KSC 14-164	Specification Change Notice	June 1968	K-AM-030/4
KSC 14-165	Specification Record	June 1968	K-AM-030/4
KSC 14-170	Request for Liaison Engineering Order	May 1969	K-AM-032/2
KSC 19-33	Procurement Request	January 1965	K-AM-031/5
KSC 21-17	Drawing Requisition or Transmittal	July 1964	K-AM-032/1
KSC 21-68	Document Release Authorization	November 1965	K-AM-032/1
KSC 21-122	Modification Instructions	October 1967	K-AM-032/2
KSC 21-137	Request for Impact	August 1968	K-AM-031/2 K-AM-031/5 K-AM-031/7 K-AM-031/8 K-AM-032/2
MSFC 2053	Interface Control Document Log and Repository Input Form	April 1968	K-AM-031/7
MSFC 2105	Interface Revision Notice	March 1968	K-AM-031/7
MSFC 2105-1	Interface Revision Notice Continuation Sheet	March 1968	K-AM-031/7
MSFC 2490	Installation Notice Card	November 1966	K-AM-031/11 K-AM-032/2